

**Silvius atitlanensis sp. nov. and Notes on Other
Species of Tabanidae (Diptera) from
Guatemala, Especially from Tikal,
El Petén**

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INTRODUCTION

The central American area encompassing Guatemala, Honduras, and the Yucatan is of considerable interest to the student of the Tabanidae because of the overlap of nearctic and neotropical faunas in that region. The area is tremendously varied ecologically and provides habitat niches for a variety of species. Furthermore, the tabanid fauna of this locale is represented largely from incidental collections, and little is known of the ecological requirements of the described species.

This paper is based upon specimens collected by Drs. T. H. Hubbell and I. J. Cantrall in four widely separated areas of Guatemala during the period of February through mid-May, 1956. The author is indebted to those gentlemen for the opportunity to study this material, all in the University of Michigan Museum of Zoology, and for the field notes relating to it. He also wishes to express his appreciation of the help furnished by Dr. C. B. Philip of the Rocky Mountain Laboratory, Hamilton, Montana, in identifying certain specimens.

THE ENVIRONMENTS AND ASSOCIATED TABANIDAE

The four localities, Tikal, Poptún, Tiquisate, and Panajachel, are widely separated and in different environments. Tikal is in the heavy lowland forest area in north central Petén in the base of the Yucatan Peninsula; Poptún is 75 miles SSE of Tikal in the pine savannas; Tiquisate is the large United Fruit Company banana plantation on the Pacific coast in the Department of Escuintla; and Panajachel is on the north shore of Lake Atitlán in the highlands of the Department of Sololá.

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TIKAL: Tikal, probably the largest and most ancient of the Mayan cities of the Old Empire period, is located 27 miles northeast of Flores on Lake Petén in the Department of El Petén. An excellent account of both the biotic and physical environments in its vicinity is found in Stuart's (1958) paper. Geologically the area is situated on a gently rolling limestone plateau at an elevation of 715 feet. It is in the heart of an unbroken forest. The two principal plant associations are a high forest and a low forest. The ruins of the city of Tikal are located in the high forest. The trees rise to heights of 150 feet and undergrowth is sparse. There are occasional shallow pools of water called "aguadas," which disappear during the dry season, leaving the area without surface water. The low forest areas ("bajos") are located in extensive flats which are often flooded during the rainy season. In the bajos the tree growth reaches a height of about 50 feet, and the almost impenetrable undergrowth is composed of shrubs, vines, and palms of many species, many of them armed with vicious spines. Most of the collecting was done in the vicinity of the air strip clearing, the base camp, and along trails in the high forest in the vicinity of the ruins. The camp was located on the rim of an aguada (apparently banked and deepened by the Mayas), which was rather densely filled with shrubs, sedges, and herbage. This aguada became dry in May. The following species of Tabanidae were collected in this environment.

Chrysops scalarata Bell. 12 ♀ specimens collected between March 15 and April 12, 1956, in open high forest around ruins, in bushy margins of the air strip bordering a bajo, along sunny forest trails, and around edges of the aguada at camp. None taken at light.

Chrysops variegata (DeGeer). 2 ♀ taken February 20 and March 7, 1956, one in a *Panicum* area in the margin of the aguada at camp, the other along a sunny trail in the high forest near the ruins.

Esenbeckia illota Will. 6 ♀ taken between March 16 and April 6, 1956, mostly along the edge of dense brush bordering the camp clearing, between 6:40 and 7:40 P.M. Two specimens came to light.

Scione aurulans (Wied.). 16 ♀ taken between February 28 and March 13, 1956, in parts of the high forest area where there is much undergrowth, along trails, in the camp clearing, and around the ruins. This series shows considerable variation in the extent of the dark abdominal markings.

Lepiselaga crassipes (Fabr.). 11 ♀ taken between February 20 and May 18, 1956, in areas of heavy, shrubby, undergrowth around the margin of the camp and airstrip clearings, around the aguada, and in the high forest near the ruins.

Chlorotabanus mexicanus (Linn.). 8 ♀ taken between March 1 and May 18, 1956, at light in camp on the embankment above the aguada.

Leucotabanus canithorax Fchld. 1 ♀ taken at camp March 10, 1956.

Diachlorus ferrugatus (Fabr.). 4 ♀ collected between March 2 and 29, 1956, in camp in vicinity of the aguada. Two taken at light.

Tabanus subruber (Bell.). 2 ♀ collected on May 12 and 19, 1956, in the camp clearing not far from the aguada. The specimen taken May 19 has the first posterior cell narrowly open, while that collected May 12 has a normally petiolate cell.

Tabanus lineola Fab. 5 ♀ collected between February 5 and March 24, 1956, in camp clearing near the aguada, in the bushy margins of the airstrip, and at light in camp.

POPTÚN: Poptún is a small village about 13 miles from the border of British Honduras in the Department of El Petén. It lies on a plain dotted with low conical limestone hills and occupied in part by a fairly extensive savanna, in part by an open grassy pine forest. There are few permanent streams, but scattered shallow depressions in the savanna contain water except during the dry months. Most of the collecting here was done in the open pine lands around the town, and in roadside ditches along the border between the pinelands and the broad-leaved tropical "high jungle" forests south of the village. The following species of Tabanidae were collected.

Chrysops variegata (DeGeer). 1 ♂ taken in pine savanna near a small stream on the outskirts of the village, April 14, 1956.

Chrysops latifasciata Bell. A single ♀ collected April 20, 1956 in a roadside ditch where the savanna gives place to the tall tropical hardwood forest.

Tabanus defilippi Bell. 2 ♀ collected April 16, 1956, in short-grazed weedy pasture bordered by open pinelands with scattered dry mud pans.

TIQUISATE: An extensive banana plantation operated by the United Fruit Company, located on the Pacific coastal plain in the hot lowlands of the southwestern part of the Department of Escuintla. Only a single species was collected here.

Tabanus carneus Bell. 1 ♂ at light near the headquarters May 9, 1956, at a point overlooking the sandy and gravelly banks and open forest bordering the Rio Siquicán.

PANAJACHEL: A small village on the north shore of the steep-walled, volcano-surrounded Lake Atitlán, in the highlands of the Department of Sololá. The town, built on the coarse sandy and gravelly outwash of the Rio Panajachel, is surrounded by many small irrigated groves of coffee ("cafetales") in which most of the collecting was done. The groves are rather open, well shaded by taller trees, and with an herbaceous ground cover most luxuriant in the vicinity of the irrigation ditches. Here two species of tabanids were taken, one of them new.

Tabanus pruinosus (Bigot). Three males were taken during night collecting in the cafetales between April 29 and May 11; all were attracted to the collector's headlight after being disturbed by the sweep-net.

Silvius atitlanensis sp. nov. Taken at Santa Marta, elevation 5,900–6,200 feet, on the slopes above Panajachel. Collected in dry pine woods on a projecting point of land with heavy, bushy undergrowth and a matted ground cover of bunch grass. Pasture lands and cultivated fields were located nearby.

Silvius atitlanensis sp. nov. (Figure 1)

A slender yellowish and brown species with maculate wings, accentuated spots dark brown; antennae robust, flagellum and scape of almost equal length; frontal callus shaped like an inverted ace of spades. Except for the antennae, the species appears similar to some species of *Assipala*.

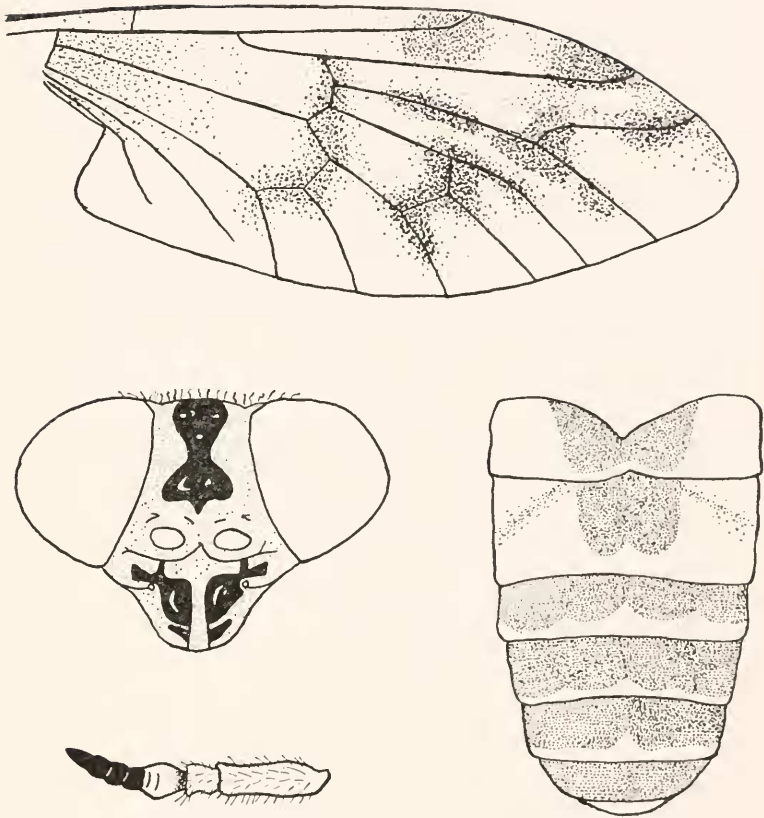


FIG. 1

1. Wing, holotype.
2. Cephalic aspect of head, holotype.
3. Antenna, holotype.
4. Dorsal aspect of abdomen, holotype.

Holotype female, length 9 mm. Eyes (relaxed) similar to *S. quadrivittatus*. Front about as high as basal width, divergent beneath; buff-yellow pollinose, denuded at the ocellar triangle, three prominent yellow ocelli; callosity large, shining brown, shield-shaped, similar to an inverted ace-of-spades (as in some *Assipala*), length and width equal, connected to ocellar triangle, widely separated from eyes. Face and cheeks buff-yellow pollinose, beard sparse and concolorous; two large, shining brown

calli around the apodemal pits, separated by a pollinose center line. Antennae robust and shaggy with coarse black hairs; length of scape and flagellum about equal; scape and pedicel yellowish-brown; flagellum orange brown, extreme base and annulets black; plates of each annulus with prominent pseudannulations. Palpi orange-brown, darkened laterally.

Dorsum of thorax yellowish-brown with four brown stripes and sparse yellow hairs. Scutellum dark brown. Pleurae brownish with faint gray pollen and mostly brownish hairs. Legs light brownish, apices of tibiae and tarsi darker; leg hairs color of leg. Wings as figured (fig. 1). Halteres dark brown, lighter distally.

Dorsum of abdomen dark brownish and yellow. The first two tergites yellow with dark bilobed markings medianly. Segments 3, 4, and 5, dark brown, bordered behind with yellow, borders expanding mediad into a row of small yellow triangles, some yellow encroaching laterally. Tergite 6 dark brown, 7 yellow. Dorsum with sparse golden hairs. Venter light brown, darkened mediad, with sparse gray pollen laterally.

Holotype collected at Sololá, Santa Marta, above Panajachel, GUATEMALA on April 30, 1956, by T. H. Hubbell. The holotype is in the Museum of Zoology of the University of Michigan, Ann Arbor.

This species will not key in Pechuman (1938) or Philip (1954), but is easily recognizable because of the yellowish body coloration and maculate wings and the almost equal length of the scape and flagellum of the antennae. Philip (1958) believes this species to be an annectant offshoot from the *S. quadrivittatus* group of which the previous farthest south representative is *S. gibsoni* from Monterrey, Mexico.

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